FrantiÅ¡ek TrojÃ¡nek

List of Publications by Year
in descending order

106 papers	1,728 citations	304743 22 h-index	330143 37 g-index
110 all docs	110 docs citations	110 times ranked	2036 citing authors

#	Article	IF	Citations
1	Multiphoton-excited exciton molecules in diamond. Journal of Luminescence, 2021, 231, 117774.	3.1	5
2	Valley-dependent Bloch-Siegert shift in monolayer WSe2: transition to the strong-field regime. , 2021, , .		0
3	Comparison of space weathering spectral changes induced by solar wind and micrometeoroid impacts using ion- and femtosecond-laser-irradiated olivine and pyroxene. Astronomy and Astrophysics, 2021, 654, A143.	5.1	11
4	Generation of few-cycle laser pulses at 2ÂÎ¼m with passively stabilized carrier-envelope phase characterized by f-3f interferometry. Optics and Laser Technology, 2021, 144, 107394.	4.6	7
5	Sub-picosecond electron dynamics in polycrystalline diamond films. Diamond and Related Materials, 2020, 108, 107935.	3.9	2
6	Observation of ultrafast impact ionization in diamond driven by mid-infrared femtosecond pulses. Journal of Applied Physics, 2020, 128, 015701.	2.5	5
7	Coherent phonon dynamics in diamond detected via multiphoton absorption. Applied Physics Letters, 2019, 115, .	3.3	9
8	Pathways of carrier recombination in Si/SiO2 nanocrystal superlattices. Journal of Applied Physics, 2019, 126, 163101.	2.5	4
9	Anisotropy and polarization dependence of multiphoton charge carrier generation rate in diamond. Physical Review B, 2019, 99, .	3.2	20
10	Interplay of bimolecular and Auger recombination in photoexcited carrier dynamics in silicon nanocrystal/silicon dioxide superlattices. Scientific Reports, 2018, 8, 1703.	3.3	13
11	Absence of free carriers in silicon nanocrystals grown from phosphorus- and boron-doped silicon-rich oxide and oxynitride. Beilstein Journal of Nanotechnology, 2018, 9, 1501-1511.	2.8	7
12	Experimental observation of anharmonic effects in coherent phonon dynamics in diamond. Diamond and Related Materials, 2018, 90, 202-206.	3.9	8
13	Voigt effect-based wide-field magneto-optical microscope integrated in a pump-probe experimental setup. Review of Scientific Instruments, 2018, 89, 073703.	1.3	2
14	Photoluminescence dynamics and quantum yield of intrinsically conductive ZnO from atomic layer deposition. Journal of Luminescence, 2018, 201, 85-89.	3.1	12
15	Simple technique for the compression of nanojoule pulses from few-cycle laser oscillator to 17-cycle duration via nonlinear spectral broadening in diamond. Optics Letters, 2018, 43, 3654.	3.3	4
16	Optical determination of the NÃ©el vector in a CuMnAs thin-film antiferromagnet. Nature Photonics, 2017, 11, 91-96.	31.4	103
17	Investigation of exchange coupled bilayer Fe/CuMnAs by pumpâ€“probe experiment. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600441.	2.4	3
18	Dynamics of photoexcited carriers in CVD diamond studied by mid-infrared femtosecond spectroscopy. Diamond and Related Materials, 2017, 71, 13-19.	3.9	10

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19	Fast Optical Control of Spin in Semiconductor Interfacial Structures. Physical Review Applied, 2017, 8, .	3.8	3
20	Quantum behavior of terahertz photoconductivity in silicon nanocrystals networks. Physical Review B, 2017, 95, .	3.2	7
21	Inertial displacement of a domain wall excited by ultra-short circularly polarized laser pulses. Nature Communications, 2017, 8, 15226.	12.8	22
22	Transverse Kerr effect in magnetic (Ga, Mn)As-based semiconductors and its applicability in waveguide isolators. Journal of Applied Physics, 2017, 122, 023104.	2.5	0
23	Investigation of magneto-structural phase transition in FeRh by reflectivity and transmittance measurements in visible and near-infrared spectral region. New Journal of Physics, 2016, 18, 083017.	2.9	18
24	Enhancement of the spin Hall voltage in a reverse-biased planarpâ^'njunction. Physical Review B, 2016, 94, .	3.2	1
25	Long-range and high-speed electronic spin-transport at a GaAs/AlGaAs semiconductor interface. Scientific Reports, 2016, 6, 22901.	3.3	13
26	Influence of air annealing on the luminescence dynamics of HPHT nanodiamonds. Diamond and Related Materials, 2016, 68, 62-65.	3.9	5
27	Picosecond dynamics of photoexcited carriers in interacting silicon nanocrystals. Applied Surface Science, 2016, 377, 238-243.	6.1	5
28	Hot-carrier transport in diamond controlled by femtosecond laser pulses. New Journal of Physics, 2015, 17, 053027.	2.9	16
29	Picosecond dynamics of photoexcited carriers in silicon nanocrystal/Si3N4 superlattices: Presence of K0 centers. Journal of Applied Physics, 2015, 117, 093101.	2.5	1
30	Comparison of micromagnetic parameters of the ferromagnetic semiconductors (Ga,Mn)(As,P) and (Ga,Mn)As. Physical Review B, 2014, 90, .	3.2	11
31	Experimental observation of spin-dependent electron many-body effects in CdTe. Journal of Applied Physics, 2014, 116, 053913.	2.5	5
32	Temperature and density dependence of exciton dynamics in IIa diamond: Experimental and theoretical study. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2244-2250.	1.8	18
33	Probing of Spin Wave Resonances in (Ga,Mn)As by Time-Resolved Magneto-Optical Technique. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	2
34	Photoexcited charge carrier dynamics in silicon nanocrystal/SiO2 superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 56, 177-182.	2.7	13
35	Absence of quantum confinement effects in the photoluminescence of Si3N4â€“embedded Si nanocrystals. Journal of Applied Physics, 2014, 115, .	2.5	44
36	Type-I InAs quantum dots covered by GaAsSb strain reducing layer. Proceedings of SPIE, 2014, , .	0.8	0

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37	Dynamics of electronâ€“hole liquid condensation in CVD diamond studied by femtosecond pump and probe spectroscopy. Diamond and Related Materials, 2013, 34, 13-18.	3.9	18
38	Hot-phonon-induced indirect absorption in silicon nanocrystals. Journal of Applied Physics, 2013, 114, 173103.	2.5	4
39	Optical study of carrier diffusion and recombination in <scp>CVD</scp> diamond. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2008-2015.	1.8	20
40	The essential role of carefully optimized synthesis for elucidating intrinsic material properties of (Ga,Mn)As. Nature Communications, 2013, 4, 1422.	12.8	82
41	Experimental observation of the optical spinâ€“orbit torque. Nature Photonics, 2013, 7, 492-498.	31.4	50
42	Control of condensation and evaporation of electronâ€“hole liquid in diamond by femtosecond laser pulses. Physica Status Solidi - Rapid Research Letters, 2013, 7, 278-281.	2.4	9
43	Coherent phonon dynamics in micro- and nanocrystalline diamond. Optics Express, 2013, 21, 31521.	3.4	17
44	Effect of temperature and excitation intensity on photoexcited charge carrier dynamics in Si-NCs/SiO₂superlattices. Proceedings of SPIE, 2013, , .	0.8	0
45	Influence of boron doping and hydrogen passivation on recombination of photoexcited charge carriers in silicon nanocrystal/SiC multilayers. Journal of Applied Physics, 2013, 114, .	2.5	7
46	Two- and three-photon absorption in chemical vapor deposition diamond. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1141.	2.1	21
47	Large prolongation of free-exciton photoluminescence decay in diamond by two-photon excitation. Optics Letters, 2012, 37, 2049.	3.3	21
48	Direct measurement of the three-dimensional magnetization vector trajectory in GaMnAs by a magneto-optical pump-and-probe method. Applied Physics Letters, 2012, 100, .	3.3	31
49	Ultrafast laser spectroscopy of semiconductor nanocrystals. International Journal of Nanotechnology, 2012, 9, 632.	0.2	2
50	Optical harmonic generation in nanocrystalline diamond. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1300-1303.	2.7	8
51	Experimental observation of the optical spin transfer torque. Nature Physics, 2012, 8, 411-415.	16.7	119
52	Ultrafast photoluminescence spectroscopy of H- and O-terminated nanocrystalline diamond films. Diamond and Related Materials, 2011, 20, 1155-1159.	3.9	5
53	Photoluminescence of nanocrystalline titanium dioxide films loaded with silver nanoparticles. Journal of Applied Physics, 2011, 109, .	2.5	24
54	Ultrafast photoluminescence dynamics of blue-emitting silicon nanostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 979-984.	0.8	7

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55	Ultrafast stimulated emission due to quasidirect transitions in silicon nanocrystals. Physical Review B, 2011, 84, .	3.2	28
56	Multicolour Photochromic Response of Ag-TiO₂ Nanocompositeâ€”Role of Light Illumination. Journal of Nanoscience and Nanotechnology, 2010, 10, 2630-2634.	0.9	4
57	Light-assisted adsorption processes in nanocrystalline diamond membranes studied by femtosecond laser spectroscopy. Diamond and Related Materials, 2010, 19, 918-922.	3.9	6
58	Nanocrystalline titanium dioxide films: Influence of ambient conditions on surface- and volume-related photoluminescence. Journal of Applied Physics, 2010, 108, .	2.5	59
59	Femtosecond luminescence spectroscopy of core states in silicon nanocrystals. Optics Express, 2010, 18, 25241.	3.4	35
60	Nonlinear optical properties of nanocrystalline diamond. Optics Express, 2010, 18, 1349.	3.4	34
61	Carrier dynamics in InAs/AlAs quantum dots: lack in carrier transfer from wetting layer to quantum dots. Nanotechnology, 2010, 21, 155703.	2.6	25
62	Light-Induced Precession of Magnetization in Ferromagnetic Semiconductor (Ga,Mn)As. Acta Physica Polonica A, 2010, 118, 1065-1066.	0.5	0
63	Ultrafast photoluminescence spectroscopy of InAs/GaAs quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 853-856.	0.8	4
64	Spectral and dynamical study of nonlinear luminescence from silicon nanocrystals excited by ultrashort pulses. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 959-962.	2.7	1
65	Subgap photoluminescence spectroscopy of nanocrystalline diamond films. Diamond and Related Materials, 2009, 18, 776-778.	3.9	9
66	Multicolour photochromic behaviour of silver nanoparticles in titanium dioxide matrix. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3496-3498.	0.8	10
67	Chemical bath deposition of CdSe and CdS nanocrystalline films: tailoring of morphology, optical properties and carrier dynamics. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2324-2329.	1.8	14
68	Ultrafast photoluminescence of nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2154-2157.	1.8	12
69	Light-induced magnetization precession in GaMnAs. Applied Physics Letters, 2008, 92, .	3.3	49
70	Laser-Induced Precession of Magnetization in GaMnAs. IEEE Transactions on Magnetics, 2008, 44, 2674-2677.	2.1	5
71	Ultrafast dynamics of photoexcited charge carriers in nanocrystalline diamond. Applied Physics Letters, 2008, 93, 083102.	3.3	11
72	Colloidal Solution of Organically Capped Si Nanocrystals in Xylene: Efficient Photoluminescence in the Yellow Region. , 2008, , .		0

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73	Nonlinear spectroscopy and applications: time-resolved nonlinear spectroscopy of silicon nanocrystals. , 2007, , .		0
74	Modification of carrier dynamics in CdSe nanocrystals by excess Cd in deposition bath. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 36, 205-210.	2.7	6
75	Ultrafast photoluminescence in silicon nanocrystals studied by femtosecond up-conversion technique. Journal of Applied Physics, 2006, 99, 116108.	2.5	51
76	Porous silicon grains in SiO2 matrix: Ultrafast photoluminescence and optical gain. Journal of Non-Crystalline Solids, 2006, 352, 3041-3046.	3.1	9
77	Femtosecond photoluminescence spectroscopy of silicon nanocrystals. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 3873-3876.	0.8	11
78	Superlinear photoluminescence in silicon nanocrystals: The role of excitation wavelength. Journal of Luminescence, 2006, 121, 263-266.	3.1	7
79	Ammonia effect on surface-mediated carrier dynamics in CdSe nanocrystals. Thin Solid Films, 2006, 503, 64-68.	1.8	13
80	Investigation of nonlinear properties of CdS-doped glasses. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 27, 38-44.	2.7	12
81	Single-step light-assisted patterning of photonic properties of chemical-bath-deposited CdSe nanocrystalline films. Thin Solid Films, 2005, 480-481, 457-461.	1.8	8
82	Picosecond photoluminescence and transient absorption in silicon nanocrystals. Physical Review B, 2005, 72, .	3.2	62
83	Substantial enhancement of photoluminescence in CdSe nanocrystals by femtosecond pulse illumination. Thin Solid Films, 2004, 453-454, 300-303.	1.8	17
84	Ultrafast carrier dynamics in CdS-doped glasses. Journal of Luminescence, 2003, 102-103, 138-143.	3.1	3
85	Novel Materials for Second Harmonic Generation - Salts of L-Valine and Selenic Acid. Materials Research Society Symposia Proceedings, 2002, 725, 1.	0.1	1
86	Ammonia-free method for preparation of CdS nanocrystalline films by chemical bath deposition technique. Thin Solid Films, 2002, 403-404, 9-12.	1.8	48
87	Ultrafast carrier dynamics in CdSe nanocrystalline films on crystalline silicon substrate. Thin Solid Films, 2002, 403-404, 462-466.	1.8	3
88	Infrared picosecond absorption spectroscopy of microcrystalline silicon: separation between carrier recombination in crystalline and amorphous fractions. Applied Physics A: Materials Science and Processing, 2002, 74, 253-256.	2.3	1
89	Ultrafast Optical Nonlinearities in CdS Nanocrystalline Thin Films Prepared by Chemical Bath Deposition. Physica Status Solidi (B): Basic Research, 2001, 224, 481-485.	1.5	10
90	Negative and positive nonlinear absorption in CdS-doped glasses. Journal of Materials Science Letters, 2001, 20, 343-345.	0.5	6

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91	Carrier diffusion in microcrystalline silicon studied by the picosecond laser induced grating technique. Applied Physics Letters, 2001, 79, 626-628.	3.3	10
92	Tailoring of nanocrystal sizes in CdSe films prepared by chemical deposition. Journal of Crystal Growth, 2000, 209, 695-700.	1.5	40
93	Light-controlled growth of CdSe nanocrystalline films prepared by chemical deposition. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 69-70, 500-504.	3.5	34
94	Ultrafast carrier dynamics in undoped microcrystalline silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 69-70, 238-242.	3.5	12
95	Dominant role of surface states in photoexcited carrier dynamics in CdSe nanocrystalline films prepared by chemical deposition. Applied Physics Letters, 2000, 77, 2352-2354.	3.3	19
96	Ultrafast carrier dynamics in wide gap hydrogenated amorphous silicon. Journal of Luminescence, 1998, 80, 435-438.	3.1	2
97	Time-resolved photoluminescence in porous silicon. Journal of Luminescence, 1997, 72-74, 347-349.	3.1	4
98	Effect of photodarkening on picosecond photoluminescence in CdSSe-doped glasses. Journal of Luminescence, 1997, 72-74, 375-376.	3.1	3
99	Photoluminescence dynamics of porous silicon: picoseconds to milliseconds. Thin Solid Films, 1996, 276, 58-60.	1.8	4
100	Optical non-linearity and hysteresis in porous silicon. Thin Solid Films, 1996, 276, 84-87.	1.8	9
101	Picosecond and millisecond dynamics of photoexcited carriers in porous silicon. Physical Review B, 1996, 54, 7929-7936.	3.2	65
102	Picosecond dynamics of photoexcited carriers in free-standing porous silicon. Thin Solid Films, 1995, 255, 77-79.	1.8	18
103	Effect of photodarkening on dynamics of visible and infrared photoluminescence inCdSxSe1â^'x-doped glass. Physical Review B, 1995, 52, R8605-R8608.	3.2	11
104	Luminescence and nonlinear optical properties of porous silicon. Journal of Luminescence, 1994, 60-61, 441-444.	3.1	4
105	Transmission study of picosecond photocarrier dynamics in free-standing porous silicon. Solid State Communications, 1994, 89, 709-712.	1.9	35
106	Photodarkening effect on absorption nonlinearity in CdSxSe_1â^'x-doped glass. Journal of the Optical Society of America B: Optical Physics, 1993, 10, 1890.	2.1	30